Owner's Manual & Safety Instructions

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's Date Code in the back of the manual (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference. 25e

FORTRESS

HIGH PERFORMANCE SERIES AIR COMPRESSOR

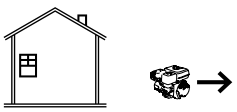
9 GALLON WHEELBARROW AIR COMPRESSOR

⚠ DANGER

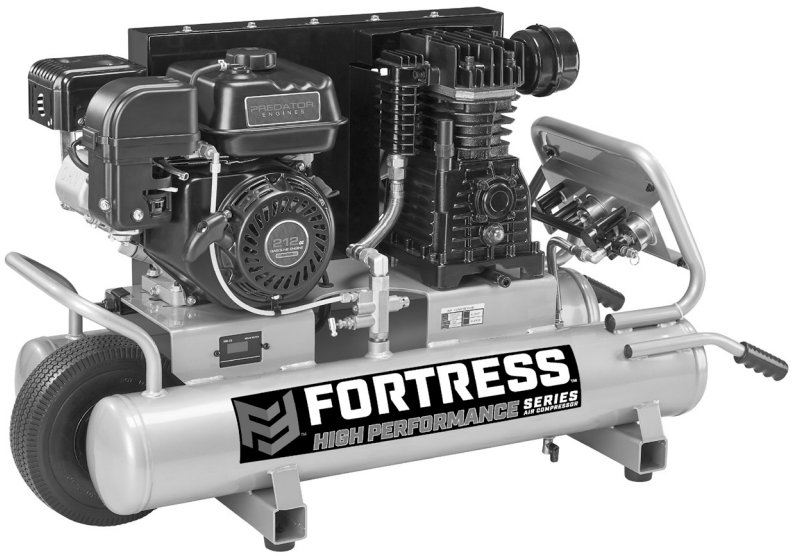
Using an engine indoors CAN KILL YOU IN MINUTES.

Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell.

NEVER use inside a home or garage, EVEN IF doors and windows are open.



Only use OUTSIDE and far away from windows, doors, and vents.



Visit our website at: https://www.harborfreight.com
Email our technical support at: productsupport@harborfreight.com

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-800-444-3353 as soon as possible.

⚠WARNING

Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

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SAFETY

INSTALLATION

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WARNING SYMBOLS AND DEFINITIONS	
⚠	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
⚠ DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
⚠ WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE CAUTION	Addresses practices not related to personal injury.

IMPORTANT SAFETY INFORMATION

General Safety Warnings

WARNING Read all safety warnings and instructions.
Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.
Save all warnings and instructions for future reference.

The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Set Up Precautions

1. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
2. **Do not operate the Compressor in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Gasoline-powered engines may ignite the dust or fumes.
3. **Keep children and bystanders away from an operating compressor.**
4. Gasoline fuel and fumes are flammable, and potentially explosive. Use proper fuel storage and handling procedures. Do not store fuel or other flammable materials nearby.
5. Have multiple ABC class fire extinguishers nearby.
6. Operation of this equipment may create sparks that can start fires around dry vegetation. A spark arrestor may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.
7. Set up and use only on a flat, level, well-ventilated surface.
8. Use only lubricants and fuel recommended in the engine manual or in the Specifications chart of this manual.
9. Wear ANSI-approved safety glasses, hearing protection, and NIOSH-approved dust mask/ respirator under a full face shield along with steel-toed work boots during use.
10. Do not overreach. Keep proper footing and balance at all times. This enables better control of the equipment in unexpected situations.
11. Dress properly. Do not wear loose clothing or jewelry. Keep hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.

Engine Precautions

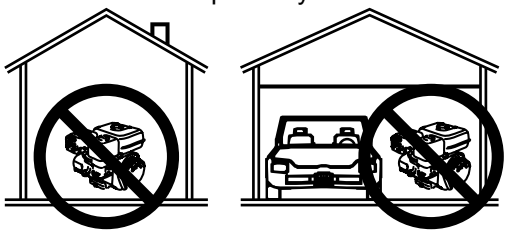
Follow engine precautions and instructions in the included engine instruction manual.

Personal Safety

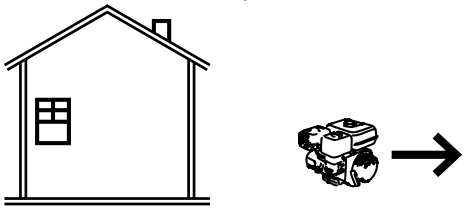
1. **Stay alert, watch what you are doing and use common sense when operating this compressor. Do not use this compressor while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating a compressor may result in serious personal injury.
2. **Use personal protective equipment. Always wear ANSI-approved eye protection during setup and use.**
3. **Prevent unintentional starting. Ensure the switch is in the off-position before moving the compressor.**

Operating Precautions

1. 
CARBON MONOXIDE HAZARD
Using an engine indoors CAN KILL YOU IN MINUTES.
Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell.



NEVER use inside a home or garage, EVEN IF doors and windows are open.



Only use OUTSIDE and far away from windows, doors, and vents.

2. Keep children away from the equipment, especially while it is operating.
3. Fire Hazard! Do not fill gas tank while Compressor engine is running. Do not operate if gasoline has been spilled. Clean spilled gasoline before starting engine. Do not operate near pilot light or open flame.
4. Do not touch Compressor engine during use. Let engine cool down after use.
   a. **Do not use the compressor if the switch does not turn it on and off.** Any compressor that cannot be controlled with the switch is dangerous and must be repaired.
   b. **Store an idle compressor out of the reach of children and do not allow persons unfamiliar with the compressor or these instructions to operate it.** A compressor is dangerous in the hands of untrained users.
5. Never store fuel or other flammable materials near the Compressor engine.
6. Only use a suitable means of transport and lifting devices with sufficient weight bearing capacity when transporting the Compressor.
7. Secure the Compressor on transport vehicles to prevent the tool from rolling, slipping, and tilting.
8. Use only accessories that are recommended by Harbor Freight Tools for your model. Accessories that may be suitable for one piece of equipment may become hazardous when used on another piece of equipment.
9. Parts, especially exhaust system components, get very hot during use. Stay clear of hot parts.
10. Do not cover the engine or equipment during operation.
11. **Maintain the compressor. Keep the compressor clean for better and safer performance. Follow instructions for lubricating and changing accessories. Keep dry, clean and free from oil and grease. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the compressor's operation. If damaged, have the compressor repaired before use.** Many accidents are caused by a poorly maintained compressor.
12. **Use the compressor in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the compressor for operations different from those intended could result in a hazardous situation.
13. Do not operate the equipment with known leaks in the engine's fuel system.
14. When spills of fuel or oil occur, they must be cleaned up immediately. Dispose of fluids and cleaning materials as per any local, state, or federal codes and regulations. Store oil rags in a bottom-ventilated, covered, metal container.
15. Keep hands and feet away from moving parts. Do not reach over or across equipment while operating.
16. Before use, check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the equipment's operation. **If damaged, have the equipment serviced before using.** Many accidents are caused by poorly maintained equipment.
17. Use the correct equipment for the application. Do not modify the equipment and do not use the equipment for a purpose for which it is not intended.

Service Precautions

Have your compressor serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the compressor is maintained.

1. **Before service, maintenance, or cleaning:**
   a. **Turn the engine switch to its "OFF" position.**
   b. **Allow the engine to completely cool.**
   c. **Then, remove the spark plug cap from the spark plug.**
2. Keep all safety guards in place and in proper working order. Safety guards include muffler, air cleaner, mechanical guards, and heat shields, among other guards.
3. **Do not alter or adjust any part of the equipment or its engine that is sealed by the manufacturer or distributor. Only a qualified service technician may adjust parts that may increase or decrease governed engine speed.**
4. Wear ANSI-approved safety goggles, heavy-duty work gloves, and dust mask/respirator during service.
5. Maintain labels and nameplates on the equipment. These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
6. Store equipment out of the reach of children.
7. Follow scheduled engine and equipment maintenance.

Air Compressor Safety Warnings

1. **Risk of fire or explosion - do not spray flammable liquid in a confined area or towards a hot surface. Spray area must be well-ventilated. Do not smoke while spraying or spray where spark or flame is present. Arcing parts - keep compressor at least 20 feet away from explosive vapors, such as when spraying with a spray gun.**
2. **Risk of bursting - do not adjust regulator higher than marked maximum pressure of attachment.**
3. **Risk of injury - do not direct air stream at people or animals.**
4. **Do not use to supply breathing air.**
5. **Keep compressor well-ventilated. Do not cover compressor during use.**
6. **Add correct amount of compressor oil before first use and every use. Operating with the incorrect amount of oil causes permanent damage and voids warranty. To prevent damage, do not use with overfilled or low oil.**
7. Drain Tank daily and after use. Internal corrosion causes tank failure and explosion.
8. Do not remove the valve cover or adjust internal components.
9. Compressor head gets hot during operation. Do not touch it or allow children nearby during or immediately following operation.
10. Do not use the air hose to move the compressor.
11. Release the pressure in the storage tank before moving.
12. The use of accessories or attachments not recommended by the manufacturer may result in a risk of injury to persons.
13. All air line components, including hoses, pipe, connectors, filters, etc., must be rated for a minimum working pressure of 175 PSI, or 150% of the maximum system pressure, whichever is greater.
14. Industrial applications must follow OSHA guidelines.
15. Maintain labels and nameplates on the compressor. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
16. This product is not a toy. Keep it out of reach of children.
17. Operate unit on level surface. Check oil level daily and fill to marked level if needed.
18. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. Caution is necessary when near the engine's magneto or recoil starter.

SAVE THESE INSTRUCTIONS.

Symbol Definitions

PSI	Pounds per square inch of pressure
CFM	Cubic Feet per Minute flow
SCFM	Cubic Feet per Minute flow at standard conditions
NPT	National pipe thread, tapered
NPS	National pipe thread, straight

RPM	Revolutions Per Minute
HP	Horsepower
	WARNING marking concerning Risk of Eye Injury. Wear ANSI-approved safety goggles with side shields.
	WARNING marking concerning Risk of Respiratory Injury. Operate engine OUTSIDE and far away from windows, doors, and vents.
	WARNING marking concerning Risk of Explosion.

Specifications

Pump		Single stage, V-style
Air Outlet Size		(2) 1/4" NPT
Air Pressure	Shut-off	135 PSI
	Restart	105 PSI
Air Tank Capacity		9 Gallons
Air Flow Capacity		10 CFM @ 90 PSI 11 CFM @ 40 PSI
Pump Oil Capacity		34.5 oz. (1L)
Oil Type		SAE 30W synthetic non-detergent (recommended), or SAE 30W non-detergent (acceptable) Air Compressor Oil
Required Rotation viewed from PTO (power takeoff - the output shaft)		Counterclockwise
Required Engine Idle Speed		2210 RPM

Note: Engine specifications are found in the engine manual supplied with this equipment.

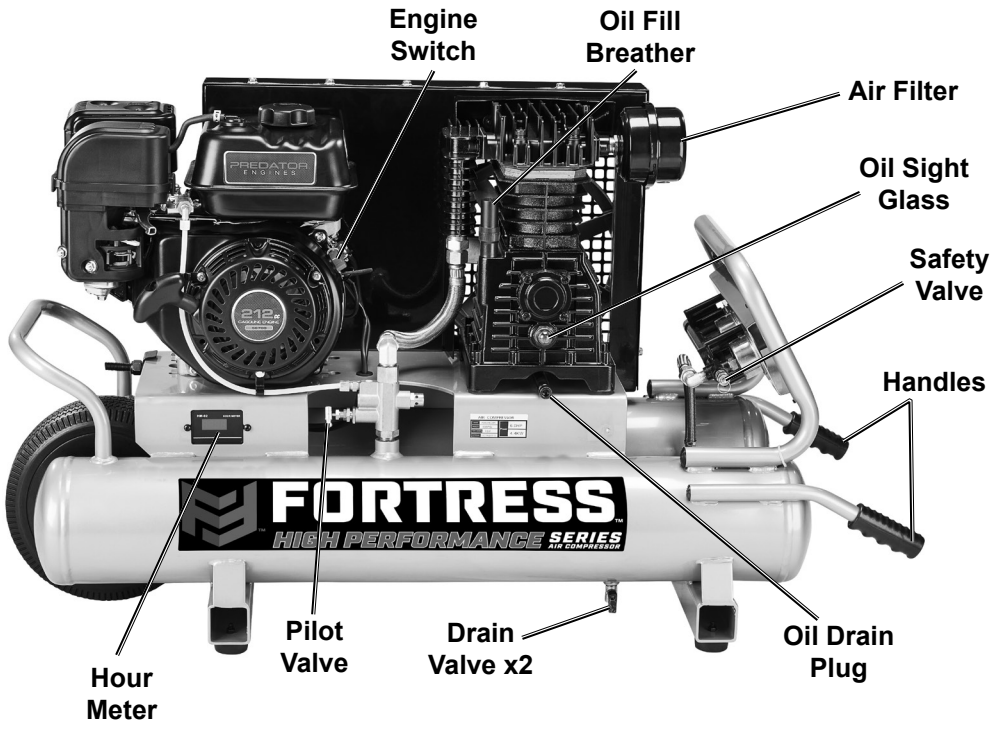
Installation

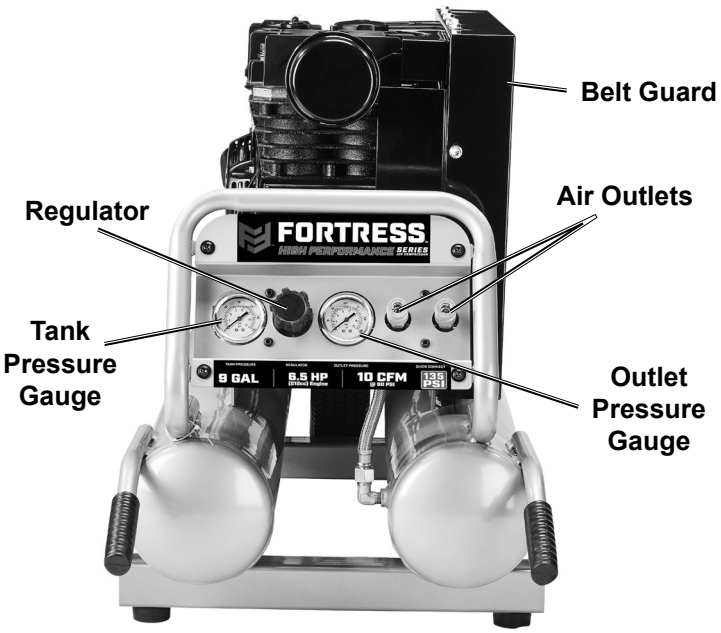
Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

The emission control system for this Compressor's Engine is warranted for standards set by the U.S. Environmental Protection Agency. For warranty information, refer to the engine manual.

Note: For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

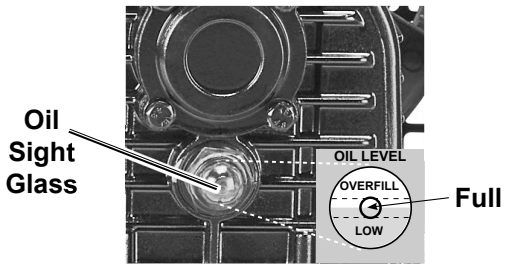
Functions





Belt Guard - Encloses the pulleys and drive belts. Protects the user from the moving parts and allows the pulley to direct cooling air to the Air Pump.

Oil Sight Glass - Shows proper level of the oil. Oil level should be at center of Sight Glass.



Drain Valves - Allows moisture to be removed from tanks to prevent corrosion.

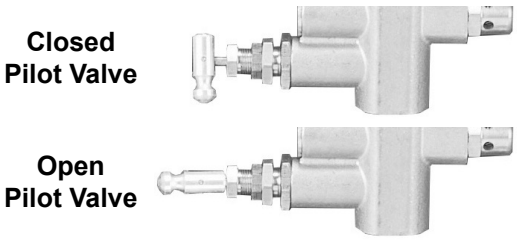
Safety Valve - Automatically releases air if Air Tank pressure exceeds the preset maximum. In an emergency, the ring can be pulled to relieve tank air pressure.

Air Tanks - Air pressurized by the Pump is stored for use.

Tank Pressure Gauge - Displays the air pressure in the tanks.

Outlet Pressure Gauge - Displays the air pressure going to tool.

Pilot Valve - Open the Pilot Valve before starting the engine. It relieves resistance on the engine to make starting possible. Rotate the pin so it is horizontal to open it. Once the engine is running, close the Pilot Valve so the Compressor can build up pressure.

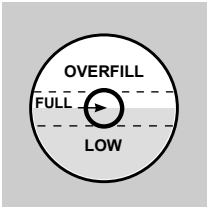


Checking the Oil

1. Check the oil level before operation. Fill the Pump Crankcase with SAE 30W, non-detergent, Air Compressor Oil (sold separately).

<u>IMPORTANT:</u> Running the Air Compressor with no oil or low oil will cause damage to the equipment and void the warranty.

2. The oil level should be at the center of the "full" level on the Oil Sight Glass, as shown in the illustration. Add oil as needed to maintain this level. Do not let the oil level go below the center dot (LOW as shown below) and do not overfill the oil so that it is above the center dot (OVERFILL as shown below).



3. To add oil:
   a. Remove the Oil Fill Breather.
   b. Using a funnel to avoid spills, pour enough oil into the Pump Crankcase to reach the "full" level in the Oil Sight Glass.
   c. Replace the Oil Fill Breather.

<u>Cold Weather Operation</u>

Premium quality 30-weight, non-detergent air compressor oil (sold separately) is recommended for use with this compressor. Start compressor in heated area if outdoor temperatures drop below 32° F. If this is not practical, drain out the old pump oil and use SAE 10W Non-detergent Air Compressor Oil in the pump crankcase instead whenever the compressor's temperature will fall below 40°. Do not use multi-viscosity oil (such as 10W-30), they leave carbon deposits on pump components and lead to accelerated failure. Heavy operation may require heavier viscosity oil.

4. If uncertain which oil to use for this compressor, call Harbor Freight Tools customer service at 1-800-444-3353 for assistance.
5. **Change the compressor oil after the first hour of use to remove any debris, as described in *Changing Oil* on page 14.**

<u>CAUTION!</u> TO PREVENT INJURY FROM BURNS:
Do not add or change the oil while the compressor is in operation.
Allow the compressor to cool before replacing oil.

Breaking in the Compressor

1. Turn Engine off.
2. Open Pilot Valve.
3. Check all fluid levels in engine and pump.
4. Start engine following the General Operating Instructions.
5. Close Pilot Valve.
6. Let the unit run for 30 minutes.
7. Turn Engine OFF.

Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

Using the Compressor

Inspect Compressor, engine, pump and equipment looking for damaged, loose, and missing parts before set up and starting. If any problems are found, do not use equipment until fixed properly.

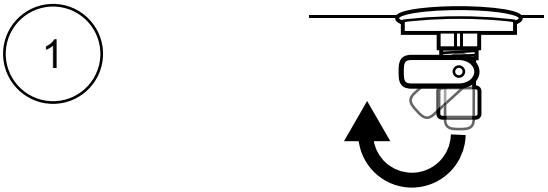
Note: At the beginning of the day's first use of the Air Compressor, check for air leaks by applying soapy water to connections while the Air Compressor is pumping and after pressure cut-out. Look for air bubbles. If air bubbles are present at connections, tighten connections. Do not use the air compressor unless all connections are air tight. The extra air leaking out will cause the compressor to operate too often, increasing wear on the compressor.

Before starting the Compressor:

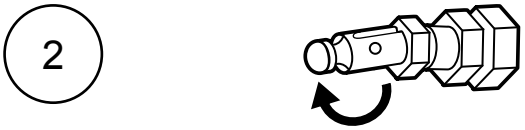
a. **Follow the Set Up Instructions in the equipment manual to prepare the equipment.**
b. **Follow the Set Up Instructions in the Engine manual to prepare the engine.**
c. **Inspect all components of the setup. Make sure all nuts and bolts are tight.**
d. **Fill the Engine with the proper amount and type of both fuel and oil.**
e. **Fill the Compressor Pump with compressor oil following the Maintenance Instructions in this manual.**
f. **Replace the plug on the crankcase with the Oil Fill Breather.**

To Start and Use the Compressor

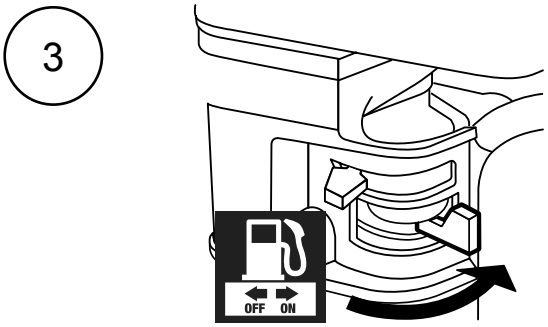
1. Close both Drain Valves.



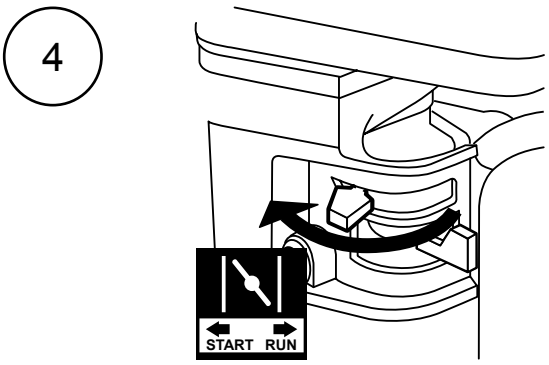
2. Open the Pilot Valve by rotating it to horizontal position.



3. Move the Fuel Valve to the ON position.

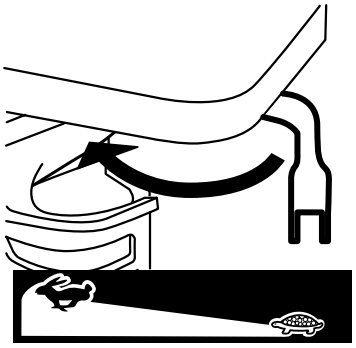


4. To start a cold engine, move the Choke Lever to START (choked) position.
   To restart a warm engine, leave the Choke Lever in the RUN position.

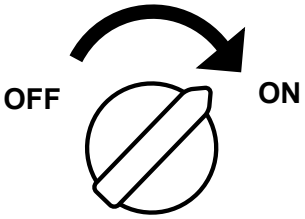


5. Slide the Throttle/Speed Control Lever to 1/3 away from the SLOW position (the “turtle”).

5



6. Turn the Engine Switch ON.



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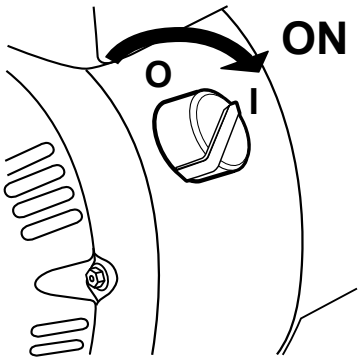
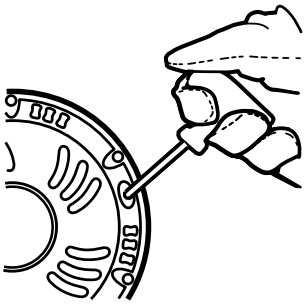


7. Grip the Starter Handle of the Engine loosely and pull it slowly several times to allow the gasoline to flow into the Engine’s carburetor. Then pull the Starter Handle gently until resistance is felt. Allow Cable to retract fully and then pull it quickly. Repeat until the engine starts.

Note: Do not let the Starter Handle snap back against the engine. Hold it as it recoils so it doesn’t hit the engine.

Note: If engine does not start, check engine oil. Engine will not start with low or no engine oil.

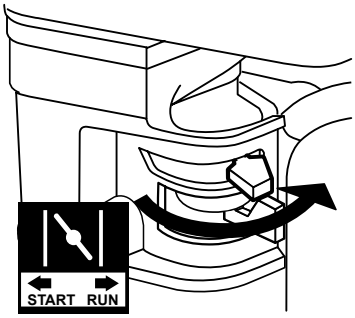
7



8. Allow the Engine to run for several seconds. Then, if the Choke Lever is in the START (choked) position, move the Choke Lever very slowly to the RUN position.

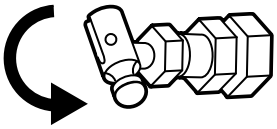
Note: Moving the Choke Lever too fast could kill the engine.

8



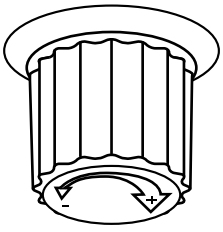
9. Close the Pilot Valve by rotating it to vertical position.

9



10. When the Gas Engine is running, the compressor Pump starts compressing air into the Air Tank. Adjust the Pressure Regulator so that the air output is enough to properly power the tool, but the output will not exceed the tool’s maximum air pressure at any time. Turn the knob clockwise to increase the pressure and counterclockwise to decrease pressure. Adjust the pressure gradually, while checking the air output gauge to set the pressure.

10



IMPORTANT: Allow the engine to run for five minutes with no load after each start-up so that the engine can stabilize.

11. Adjust the Throttle/Speed Control Lever as needed.

12. **Engine Break-in Period:**
    a. Breaking-in the engine will help to ensure proper equipment and engine operation.
    b. The operational break-in period will last about 3 hours of use. During this period:
       • Do not apply a heavy load to the equipment.
       • Do not operate the engine at its maximum speed.
    c. The maintenance break-in period will last about 20 hours of use. After this period:
       • Change the engine oil.

    Under normal operating conditions subsequent maintenance follows the schedule explained in the MAINTENANCE AND SERVICING section.

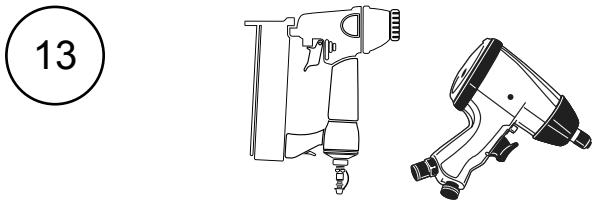
Note: When maximum tank pressure is reached, the compressor automatically disengages, and the engine RPM drops down to idle speed. The engine remains at idle until Air Tank pressure falls to a preset level. The Gas Engine will then accelerate and air pressure once again begins to build up in the Air Tank.

Note: As long as the engine is running, the operation of the Air Compressor is automatic, controlled by an internal pressure switch.

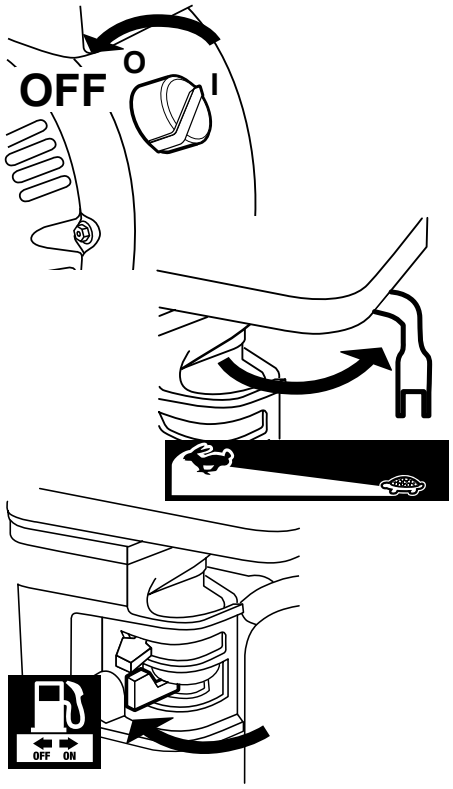
IMPORTANT: The internal pressure switch is not user adjustable; **do not make changes to the air pressure settings of the internal pressure switch.** Any change to the automatic pressure levels may cause excess pressure to accumulate, causing a hazardous situation.

Note: Depressurization - If it is necessary to quickly *depressurize* the Compressor, turn OFF the engine. Then, pull on the ring on the tank Safety Valve to release stored air pressure.

13. Use the air tool as needed.



14. To stop the engine in an emergency, turn the Engine Switch off.



Under normal conditions, use the following procedure:

a. Slide the Throttle/Speed Control Lever to SLOW (the “turtle”).

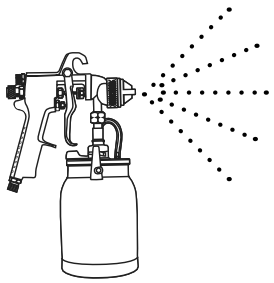
b. Turn the Engine Switch off.

c. Close the Fuel Valve.

WARNING! TO PREVENT SERIOUS INJURY: The fuel valve must be closed before moving the engine to prevent fuel leakage and fire.

15. Bleed air from the tool, then disconnect the tool.

15



16. Drain Air Tanks according to *Draining Moisture from the Tanks* on page 15.

17. Clean, then store the Air Compressor indoors.

Emergency Depressurization

If it is necessary to quickly *depressurize* the Compressor, turn the Engine Switch OFF. Then pull the ring on the Safety Valve to quickly release stored air pressure.

Procedures not specifically explained in this manual must be performed only by a qualified technician.

⚠WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Turn the Engine Switch of the equipment to its "OFF" position, release tank air pressure, wait for the engine to cool, and disconnect the spark plug cap before performing any inspection, maintenance, or cleaning procedures.

TO PREVENT SERIOUS INJURY FROM COMPRESSOR FAILURE:
Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

CAUTION! TO PREVENT INJURY FROM BURNS: Do not add or change the oil while the compressor is in operation. Allow the compressor to cool before replacing oil.

Cleaning, Maintenance, and Lubrication

1. **BEFORE EACH USE,** inspect the general condition of the air compressor. Check for:
   - loose hardware,
   - misalignment or binding of moving parts,
   - damaged belts,
   - cracked or broken parts,
   - damaged electrical wiring, and
   - any other condition that may affect its safe operation.
2. **AFTER USE,** wipe external surfaces of the compressor with a clean cloth.

Compressor Pump Oil Maintenance

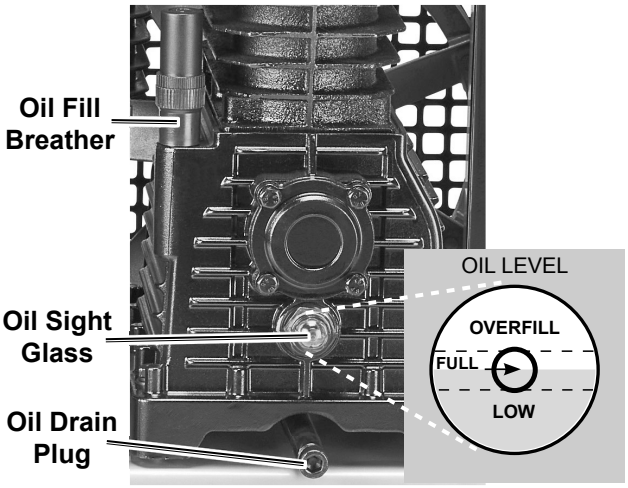
Check oil periodically for clarity. Replace oil if it appears milky or if debris is present, or every 6 months, or 100 hours of runtime, whichever comes first. In harsh environments such as high heat or high humidity, replace the oil more frequently.

Change compressor oil after first twenty hours of use to remove any debris.

Changing Oil

CAUTION! TO PREVENT INJURY FROM BURNS: Do not add or change the oil while the compressor is in operation. Allow the compressor to cool before replacing oil.

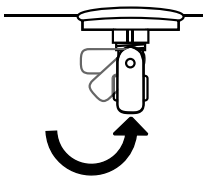
1. Place a container under Oil Drain Plug.
2. Remove Oil Fill Breather to allow air flow into the Pump.
3. Remove Oil Drain Plug, allowing the oil to drain into the container.
4. When the oil is completely drained from the Pump, replace Oil Drain Plug.
5. Fill the Pump with new compressor oil to the FULL level on Oil Sight Glass.
6. Replace and tighten Oil Fill Breather.
7. Discard old oil according to local, state and federal regulations.



Draining Moisture from the Tanks

A Drain Valve is located under each Tank. They must be used daily to release all trapped air and moisture from the Tanks. Doing this will eliminate condensation and prevent tank corrosion.

1. Turn Engine Switch off.
2. Place a collection pan under each Drain Valve.
3. Open both Drain Valves.



4. When all the pressure and moisture is released, close both Drain Valves.

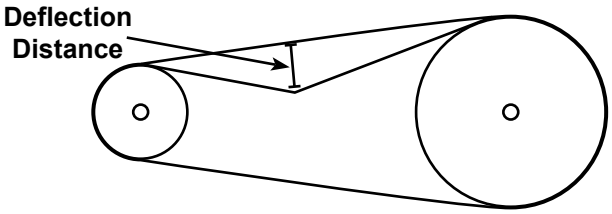
Air Filter Maintenance

Check the Air Filter weekly to see if it needs cleaning or replacement. If working in dirty environments, you may need to replace filter more often. To replace Air Filter:

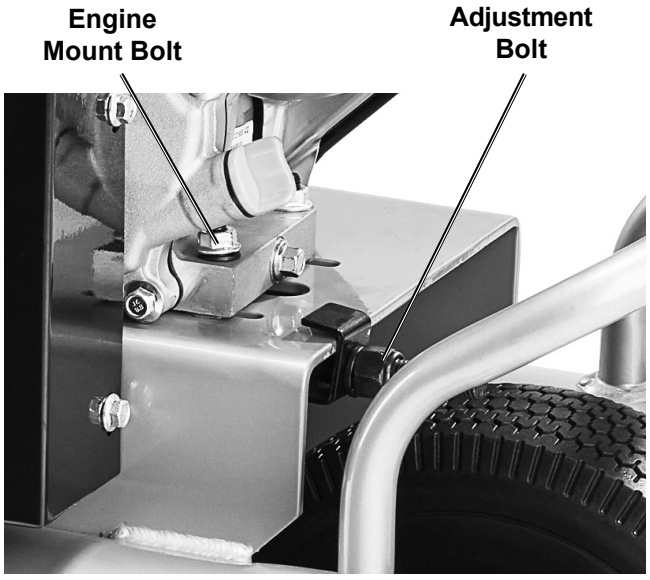
1. Remove Cover and Filter. Check Filter for accumulated dirt.
2. **Cleaning:**
   - For paper filter elements: To prevent injury from dust and debris, wear ANSI-approved safety goggles, NIOSH-approved dust mask/respirator, and heavy-duty work gloves. In a well-ventilated area away from bystanders, use pressurized air (no more than 15 PSI) to blow dust out of the air filter. If this does not get the filter clean, replace it.
   - For foam filter elements: Wash the element in warm water and mild detergent several times. Rinse. Squeeze out excess water and allow it to dry completely. Soak the filter in lightweight oil briefly, then squeeze out the excess oil.
3. Replace the cleaned Filter and Cover.

Adjusting Belt Tension

1. Remove Belt Guard and set it aside.
2. Press on the center of the longest span on each belt with moderate finger pressure (4-4.5 lb.). Then measure the deflection distance, the distance that the belt moved. The belt should deflect anywhere from 1/2" to 1".



3. **If belt deflects too much,** tighten belt by loosening the four Engine Mount Bolts and turning the Adjustment Bolt *clockwise* to shift engine away from other pulley. Retighten Engine Mount Bolts and retest tension. If belt is too long to be properly tensioned, belt must be replaced.
4. **If belt deflects too little,** loosen belt by loosening the four Engine Mount Bolts and turning the Adjustment Bolt *counterclockwise* to shift the engine toward the other pulley. Retighten Engine Mount Bolts and retest tension.



5. Replace Belt Guard before use.

Maintenance Schedule

Following are general guidelines for maintenance checks of the Air Compressor.

Note: The environment in which the compressor is used, and the frequency of use will affect how often you will need to check the Air Compressor components and perform maintenance procedures.

Daily:

a. Check oil level.
b. Check for oil leaks.
c. Make sure all nuts and bolts are tight.
d. Drain moisture from air tanks.
e. Check for abnormal noise or vibration.
f. Check for air leaks.*
g. Inspect belts.
h. Wipe off any oil or dirt from the compressor.**

Weekly:

a. Inspect Air Filter.
b. Inspect Oil Fill Breather.

Monthly:

a. Inspect Pressure Relief Valve.
b. Inspect vibration isolation pads (if installed).

* To check for air leaks, apply soapy water to joints while the Air Compressor is pressurized. Look for air bubbles.

** To clean the compressor surface, wipe with a damp cloth, using a mild detergent or mild solvent.

Troubleshooting

Problem	Possible Causes	Likely Solutions
Engine will not start (Note: See engine manual for engine specific issues.)	COMPRESSOR SPECIFIC: 1. Pilot Valve closed. 2. Engine Switch in ″OFF″ position.	COMPRESSOR SPECIFIC: 1. Open pilot valve before start procedure, close after unit is running. 2. Turn engine to ″ON″ position.
Compressor overheats	1. Incorrect lubrication or not enough lubrication. 2. Worn parts.	1. Lubricate using recommended oil or grease according to directions. 2. Have qualified technician inspect internal mechanism and replace parts as needed.
Severe air leakage	1. Poor air outlet seal. 2. Loose cylinder/cylinder head. 3. Damaged valve or housing. 4. Dirty, worn or damaged valve.	1. Tighten or re-attach using thread seal tape. 2. Tighten cylinder/cylinder head assembly. If cylinder/cylinder head cannot tighten properly, internal parts may be misaligned. 3. Replace damaged components. 4. Clean or replace valve assembly.
Unit stalls	1. Low engine idle. 2. Severely clogged air filter. 3. Improper lubrication. 4. Defective pilot/unloader valve.	1. Qualified technician should increase idle to 2,000±100 RPM by adjusting pressure switch. 2. Replace air filter. 3. Check for proper oil level. 4. Replace pilot valve.
Excessive noise	1. Loose drive pulley or flywheel. 2. Misaligned pulleys. 3. Lack of oil in crankcase. 4. Worn connecting rod. 5. Worn wrist pin bushing. 6. Worn bearings. 7. Loose belts.	1. Loose pulleys are a common cause of “knocking”. Tighten appropriate bolts. 2. Align pulleys with straightedge and secure in place. 3. Check for proper oil level. 4. Replace connecting rod. 5. Remove piston assembly and replace necessary parts. 6. Replace bearings and oil. 7. Check for proper belt tension.
Oil in the discharge air	1. Wrong type of oil or low-quality oil. 2. Overheating. 3. Restricted intake air. 4. Worn piston rings. 5. Excessive moisture in the tanks.	1. Change oil. Check oil recommendations under Maintenance section of this manual. 2. See above Excessive Noise section. 3. Clean or replace air filter. 4. Replace piston rings. 5. Drain moisture from the tanks daily.
Low discharge pressure	1. Air leaks. 2. Leaking valves. 3. Restricted air intake. 4. Blown gaskets. 5. Slipping belt.	1. Listen for escaping air. Apply soap solution to all fittings and connections. Bubbles will appear at points of leakage. Tighten or replace leaking fittings or connections. 2. Remove head and inspect for valve breakage, weak valves, scored valve plate, etc. Replace defective parts and reassemble. Replace head gasket each time the head is removed. 3. Clean or replace air filter element. 4. Replace if gaskets proven faulty on inspection. 5. Tighten Belt (See Maintenance.)

Follow all safety precautions whenever diagnosing or servicing the equipment or engine.

PLEASE READ THE FOLLOWING CAREFULLY

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Parts List

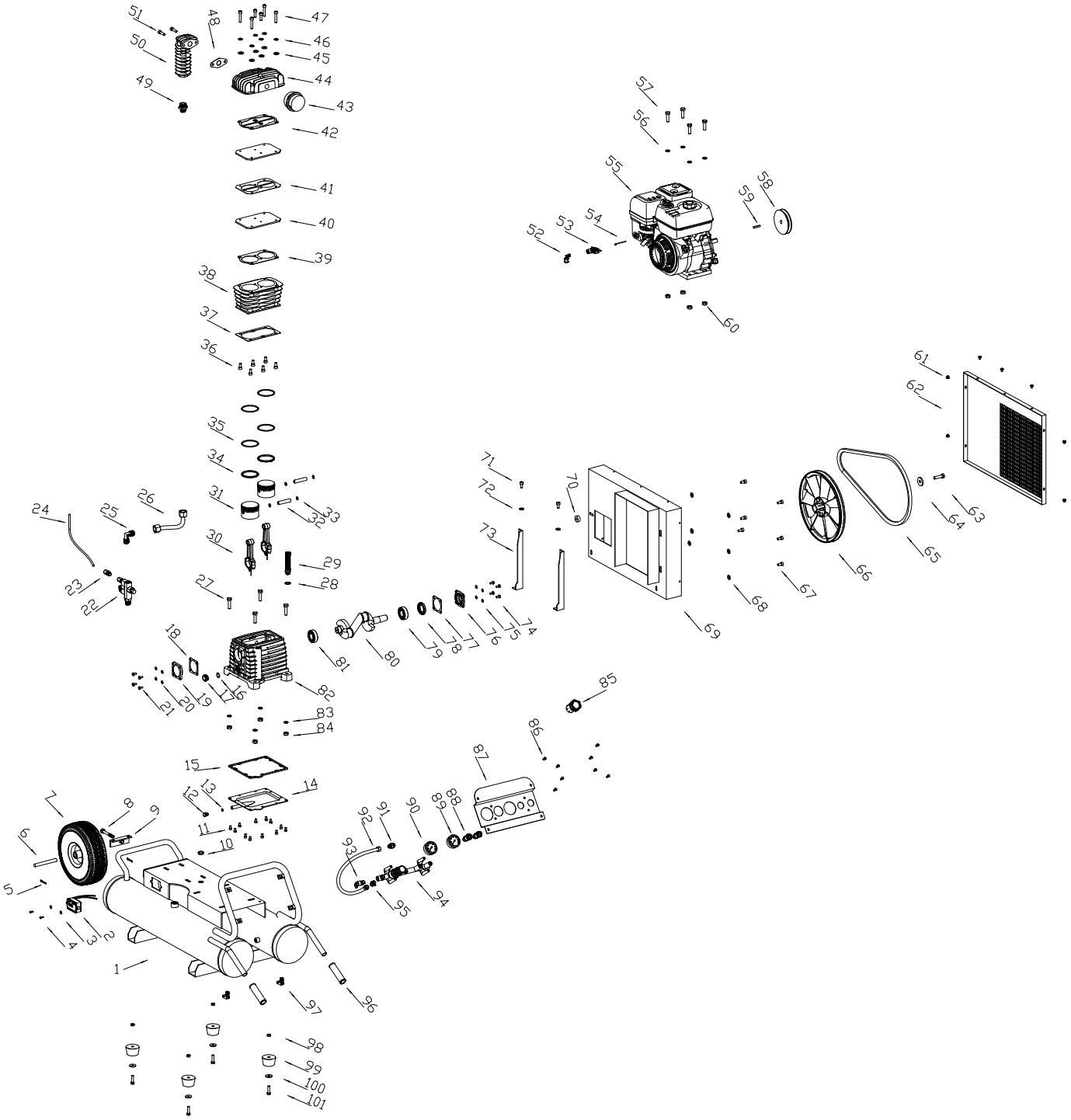
Part	Description	Qty
1	Tank	1
2	Hour Meter	1
3	Flat Washer	2
4	Socket Cap Screw	2
5	Cotter Pin	2
6	Axle	1
7	10″ Wheel	1
8	Adjustment Bolt	1
9	Adjustment Bracket	1
10	Snap Bushing	1
11	M6 Socket Bolt	12
12	Oil Drain Plug	1
13	O-Ring	1
14	Baseplate	1
15	Baseplate Seal	1
16	Oil Sight Glass Seal	1
17	Oil Sight Glass	1
18	Back Cover Gasket	1
19	Back Cover	1
20	Flat Washer	4
21	M6 Hex Bolt	4
22	Pilot Valve	1
23	Connector	1
24	Control Tube	1
25	Elbow Connector	1
26	Exhaust Pipe	1
27	M10 Engine Mount Bolt	4
28	O-Ring	1
29	Oil Fill Breather	1
30	Connecting Rod	2
31	Piston	2
32	Piston Pin	2
33	Pin Clip	4
34	Oil Ring	2
35	Compressing Ring	4
36	M8 Socket Bolt	6
37	Cylinder Gasket	1
38	Cylinder	1
39	Valve Plate Gasket	1
40	Valve Plate	2
41	Copper Gasket	1
42	Head Cover Gasket	1
43	Air Filter	1
44	Head Cover	1
45	Flat Washer	6
46	Spring Washer	6
47	M8 Socket Bolt	6
48	After-cooler Gasket	1

Part	Description	Qty
49	Exhaust Connector	1
50	After-cooler	1
51	M8 Socket Bolt	2
52	Elbow Connector	1
53	Throttle Control Valve	1
54	Steel Wire	1
55	Engine	1
56	Flat Washer	4
57	M8 Hex Bolt	4
58	Pulley	1
59	Key	1
60	Nut	4
61	Cover Screw	7
62	Belt Guard Cover	1
63	Flywheel Bolt	1
64	Flywheel Flat Washer	1
65	V-Belt	1
66	Flywheel	1
67	M6 Socket Bolt	7
68	Flat Washer	7
69	Belt Guard	1
70	Cushion	1
71	M8 Socket Bolt	2
72	Flat Washer	2
73	Support Bracket	2
74	M6 Socket Bolt	4
75	Flat Washer	4
76	Front Cover	1
77	Front Cover Gasket	1
78	Oil Seal	1
79	Ball Bearing 6205	1
80	Crankshaft	1
81	Ball Bearing 6205	1
82	Crankcase	1
83	Flat Washer	4
84	Nut	4
85	Regulator Knob	1
86	Torx Screw	8
87	Control Panel	1
88	Air Outlet	2
89	Outlet Pressure Gauge	1
90	Tank Pressure Gauge	1
91	Elbow Connector	1
92	Connecting Pipe	1
93	Safety Valve	1
94	Regulator	1
95	Elbow Connector	1
96	Handle	2

Part	Description	Qty
97	Drain Valve	2
98	Nut	4
99	Foot	4

Part	Description	Qty
100	Flat Washer	4
101	M8 Hex Bolt	4

Assembly Diagram



Record Product's Date Code Here:_____

Note: If product has no Date Code, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts. Reference UPC 193175510303.

Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS, EXCEPT FOR THE EMISSIONS CONTROL SYSTEM WARRANTY BELOW.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. HFT also warrants that the emissions control system on your engine is designed, built, and equipped so that it conforms to the United States Environmental Protection Agency's (EPA) emissions requirements in effect at the time of manufacture.

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